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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,476	07/17/2007	Miguel De Vega Rodrigo	2004P0151WOUS	9497
29177	7590	02/18/2010	EXAMINER	
K&L Gates LLP P.O. BOX 1135 CHICAGO, IL 60690			HO, DUC CHI	
			ART UNIT	PAPER NUMBER
			2465	
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			02/18/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,476	Applicant(s) RODRIGO ET AL.	
	Examiner DUC C. HO	Art Unit 2465	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09-28-06</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. Figures 2B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: Applicant is requested to arrange the specification of the instant application including the below sections in order.

Appropriate correction is required.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

Art Unit: 2465

COMPACT DISC.

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6, 12-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art at figures 2B, page 3, of the instant application, hereinafter referred to as the APA, in view of Torsner et al. (US 7,187,677), hereinafter referred to as Torsner.

Regarding claim 6, the APA discloses a centralized network-fig.2B in which an edge node sending a path setup 8 to a control entity-fig.2B (corresponding to sending a path set-up request from a node to a controller);

The APA, however, does not expressly teach [the control entity] sending an acknowledgment message from the controller to the node, only when a network connection has been established.

Torsner discloses avoiding stall condition and sequence number ambiguity in an automatic repeat request protocol. In Torsner when only correct (or corrected) data units are stored in the ordering buffer 26-fig.3, the controller 22 sends an acknowledgment (ACK) for correctly received data units, see col.6, lines 9-19. In other words, the controller only sends ACK to the node in response to a completion of a task the node requesting for.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ a mechanism in which the controller only sends ACK to the node in response to a completion of a requested task at the node as taught by Torsner into the system of the APA. The suggestion/motivation for doing so would have been to provide sufficient time and resources for establishing an end to end connection in

accordance with guaranteed end-to-end resource reservation before the controller sending an acknowledgment to the requested edge node.

Regarding claim 12, the APA discloses a centralized optical network in figure 2B.

Regarding claim 13, this claim has similar limitations as claim 6. Therefore, it is rejected under the APA-Torsner for the same reasons set forth in the rejection of claim 6. The control entity-fig.2B of the APA no longer sends a NACK to the edge node since the system is modified with Torsner's technique, that is to only send an ACK to the requested edge node in response to an establishment of an end-to-end connection that the edge node-fig.2B had requested for.

Regarding claim 14, this claim has similar limitations as claim 6. Therefore, it is rejected under the APA-Torsner for the same reasons set forth in the rejection of claim 6. The APA discloses a single path set-up request 8-fig.2B is used to establish a connection, and the control entity-fig.2B of the APA no longer sends a NACK for multi path setup since the system is modified by Torsner's technique, that is to only send an ACK to the requested edge node in response to an establishment of an end-to-end connection that the edge node-fig.2B had requested for.

Regarding claim 20, the APA discloses a centralized optical network in figure 2B.

6. Claims 7-9, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA, in view of Torsner, and further in view of Jorgensen (US 2005/0232193).

Regarding claim 7, the APA and Torsner discloses all claimed limitations, except the queuing system at the node designed such that packets received at the node while awaiting for the acknowledgment are discarded.

Jorgensen discloses transmission control protocol/Internet protocol (TCP/IP) packet-centric wireless point to multi-point (PTMP) transmission system architecture.

The Internet Protocol has a counter mechanism, that decrements every time the packet passes through a network node. If the counter expires the node will discard the packet, see 0251. In another aspect as to when the packet should be discarded, Jorgensen teaches that one function of the module 1630-fig.16A is to determine whether the packet is old (i.e., stale), and if the packet is old, it will be discarded, see 0056. In other words, packets will be discarded whether they are being queued for next stage processing or awaiting for the acknowledgment, because discarding packet mechanisms are provided to solve stale packets when they had been queued too long, specially when their TTL (time to live) suggesting the packet should be discarded, see 0430.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ packet discarding mechanism as taught by Jorgensen into the combined system of the APA and Torsner. The suggestion/motivation for doing so would have been to discard packets when their TTL (time to live) suggesting the packets should be discarded in order to ensure reliable data stream is sent and delivered.

Regarding claim 8, Jorgensen teaches the packets are based on an Internet Protocol, see 0251.

Regarding claim 9, Jorgensen discloses weighted fair queuing, see 0137.

Regarding claims 15-17, these claims have similar limitations as claims 7-9, respectively. Therefore, they are rejected under the APA-Torsner-Jorgensen for the same reasons set forth in the rejection of claim 7-9.

7. Claims 10-11, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA, in view of Torsner and Jorgensen, and further in view of Bryson (US 2004/0185777).

Regarding claim 10, the APA-Torsner-Jorgensen discloses all claimed limitations, except the WFQ scheme selectively dismisses packets having a lower priority in order to store more recently arrived IP packets having a higher priority.

Bryson discloses portable wireless gateway. According to Bryson scheduling algorithms such as weighted fair queuing can be used by the queuing engine 222-fig.8, and if necessary, the queuing engine 222 may drop lower priority packets to ensure resources are available for higher quality packets, see 0095.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ the scheduling algorithm such as the WFQ taught by Bryson into the combined system of the APA-Torsner-Jorgensen. The suggestion/motivation for doing so would have been to drop lower priority packets to ensure resources are available for higher quality packets.

Regarding claim 11, Jorgensen teaches the packets are based on an Internet Protocol, see 0251.

Regarding claims 18-19, these claims have similar limitations as claims 10-11, respectively. Therefore, they are rejected under the APA-Torsner-Jorgensen-Bryson for the same reasons set forth in the rejection of claim 10-11.

Conclusion

Art Unit: 2465

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stevenson et al.(US 2005/0013613); Tzathas et al.(US 6,973,229) are cited to show a method of optimizing connection set-up times between nodes in a centrally controlled network, which is considered pertinent to the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/594,476
Art Unit: 2465

Page 9

Patent Examiner

/DUC C HO/

Primary Examiner, Art Unit 2465

02-12-2010